

REMARKS

Claims 7-11 were pending in the instant application. The specification has been amended to include a table number. Claims 8-10 have been cancelled without prejudice. Claims 7 and 11 have been amended in order to claim more fully and distinctly the invention. Accordingly, claims 7 and 11 are currently pending in the present application. Support for the amended table number and claims can be found throughout the specification and claims as originally filed. Specifically, support for the amended table number may be found at least at page 48, line 7 and page 55, line 4. Support for the amended claim 7 may be found at least, for example, at page 7, line 30 through page 8, line 3. Support for the amended claim 11 may be found at least, for example, at page 5, lines 12-23. No new matter has been added.

Attached hereto is Appendix A, captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE". The attached Appendix includes a marked-up version of the changes made to the specification by the current amendment. Also attached hereto is APPENDIX B, including the full set of claims that are currently pending. Also attached hereto is APPENDIX C, including the SEQ ID NO:2 from U.S. Serial No. 60/044,185, filed March 24, 1997. Also attached hereto is APPENDIX D, including the SEQ ID NO:15 from U.S. Serial No. 09/062,142, filed March 17, 1998.

Amendment of the claims is not to be construed as an acquiescence to any of the rejections set forth in the instant Office Action, and was done solely to expedite prosecution of the instant application. Applicants reserve the right to pursue the claims as originally filed, or similar claims, in this or one or more patent applications.

Claim Rejections Under 35 U.S.C. §101

Claims 7-11 stand rejected under 35 U.S.C. §101 on the ground that the claimed invention is not supported by a specific asserted utility or a substantial utility. Applicants respectfully disagree and traverse the foregoing rejection for the following reasons.

Claims 8-10 have been cancelled, rendering the rejection moot with respect to these claims. Moreover, with respect to the presently pending claims 7 and 11, it is Applicants' position that a specific and substantial utility for the claimed invention is clearly set forth in the instant specification and the knowledge in the art at the time of Applicants' invention.

Applicants disclose in the instant specification a full-length cDNA which contains an open reading frame encoding the polypeptide of SEQ ID NO:3. Applicants assert in the instant specification that the protein has a significant degree of homology to trypsin-type serine proteases (see, *e.g.* page 50, lines 1-3). Moreover, functional analysis of this protein demonstrated urokinase activity upon transfection into COS7 cells (see, *e.g.* page 49, line 23-25), indicating that this protein shares the activities of urokinase-like proteins.

Urokinase-like proteins are a subgroup of the serine protease family of enzymes and include, but are not limited to, urokinase, streptokinase, vascular plasminogen activator and tissue plasminogen activator. These enzymes are well-known in the art by their mechanism of action, which is based on the formation of an acyl enzyme intermediate on a specific active serine residue. Specifically, urokinase-like molecules act as plasminogen activators, acting on plasminogen to generate plasmin. This activity is important for a number of biological functions, including wound healing, hemostasis and thrombolysis.

Applicants assert that novel molecules of the present invention can be used, for example, as modulators of hemostatic and thrombolytic activity, *i.e.* for dissolving or inhibiting formation of thromboses (see, *e.g.* page 33, lines 19-23) or modulating coagulation (see, *e.g.*, page 33, lines 13-19), or as modulators of tissue growth activity, *i.e.* for use in wound healing (see, *e.g.*, page 27, lines 6-8). Accordingly, the polypeptide of the present invention can be used for diagnostic and therapeutic purposes for disorders which involve any of these biological activities (see, *e.g.*, the specification, at least, for example, at page 29, lines 22-26 and page 33, lines 13-23).

The specificity of the asserted utilities is based on the fact that the polypeptide of the present invention belongs to the urokinase-like protein subfamily of serine proteases, a family sharing structural and functional characteristics which are not shared by other non-urokinase proteins. In particular, urokinases are known to act as plasminogen activators, cleaving plasminogen to generate plasmin. This activity is important for a number of biological functions, including wound healing, hemostasis and thrombolysis. Applicants respectively assert that these activities are specific to the urokinase subfamily of serine proteases and are not shared by all other protein-encoded nucleic acid molecules.

Moreover, no evidence has been made of record that Applicants' assertions regarding the activity and/or utility of SEQ ID NO:3 polypeptides as modulators of tissue growth activity, *i.e.*

wound healing, or hemostatic and/or thrombolytic activity would not be considered credible to one of skill in the art. As the Examiner is aware, an applicant must provide only one credible assertion of utility for any claimed invention to satisfy the utility requirement. The instant application teaches a specific and substantial biological function for the SEQ ID NO:3 polypeptides of the invention. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. §101.

Claim Rejections Under 35 U.S.C. §112, first paragraph

Claims were rejected 7-11 under 35 U.S.C. §112, first paragraph. Specifically, the Office Action states that "[s]ince the claimed invention is not supported by either a specific and substantial utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention." Applicants respectfully traverse.

Without acquiescing to the alleged lack of enablement in the specification as originally filed, claims 8-10 have been cancelled, thus rendering the rejection moot. Applicants submit that the rejection with regard to these claims is therefore obviated.

With respect to newly amended claims 7 and 11, Applicants would like to make the following remarks of record. As argued above, the present invention is supported by a substantial utility and a well-established utility. Specifically, the asserted utilities are based on the fact that SEQ ID NO:3 polypeptides of the present invention are urokinase-like proteins, a subfamily of the serine protease enzyme family. Further, the specification is replete with teachings of how to make and/or use the present invention. For example, the specification teaches that novel molecules of the present invention can be used, for example, as modulators of hemostatic and thrombolytic activity, i.e. for dissolving or inhibiting formation of thromboses (see, e.g. page 33, lines 19-23) or modulating coagulation (see, e.g., page 33, lines 13-19), or as modulators of tissue growth activity, i.e. for use in wound healing (see, e.g., page 27, lines 6-8). Accordingly, the polypeptide of the present invention can be used for diagnostic and therapeutic purposes for disorders which involve any of these biological activities (see, e.g., the specification, at least, for example, at page 29, lines 22-26 and page 33, lines 13-23). Applicants respectfully submit that any experimentation that may be required to make and/or use the

claimed polypeptide molecules constitutes routine, not undue, experimentation and therefore the specification clearly enables the pending claims.

Claims 8-11 were further rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Without acquiescing to the alleged lack of written description in the specification as originally filed, claims 8-10 have been cancelled, thus rendering the rejection moot as it applies to these claims. Claim 11 has been amended to depend from claim 7, thus rendering the rejection moot as it applies to this claim. Applicants submit that the rejection with regard to these claims is therefore obviated.

Claims 8-10 were also rejected under 35 U.S.C. §112, first paragraph, for lack of enablement. Specifically, the Office Action states that while the specification is enabling for a protein encoded by SEQ ID NO:3, it does not enable a "polypeptide consisting of a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:3" or "a polypeptide consisting of a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:3" or "a polypeptide which is at least 60% homologous to a polypeptide encoded by the amino acid sequence of SEQ ID NO:3."

Without acquiescing to the alleged lack of enablement in the specification as originally filed, claims 8-10 have been cancelled, thus rendering the rejection moot. Applicants submit that the rejection with regard to these claims is therefore obviated.

Claim Rejections Under 35 U.S.C. §112, second paragraph

Claims 8, 9 and 11 were rejected under 35 U.S.C. 35 §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Office Action states that claim 8 is rejected as vague and indefinite in the recitation of the phrase "fragment," claim 11 is rejected insofar as it depends on claim 8, and claim 9 is rejected as vague and indefinite for reciting the phrases "allelic variant" and "stringent conditions."

Without acquiescing to the alleged lack of definiteness in the specification as originally filed, claims 8 and 9 have been cancelled, thus rendering the rejection moot as it applies to these

claims. Claim 11 has been amended to depend from claim 7, thus rendering the rejection moot as it applies to this claim. Applicants submit that the rejection with regard to these claims is therefore obviated.

Claim Rejections Under 35 U.S.C. 102(e)

Claims 7-11 were rejected under 35 U.S.C. §102(e) as being anticipated by Sheppard (U.S. Patent No. 6,153,420). Specifically, the Office Action states that "Sheppard teaches a serine protease polypeptides [sic]. The polypeptide sequence (SEQ ID NO:18) described by Sheppard in U.S. Patent No. 6,153,420 (columns 41-44) has over 100% identity over its entire length to SEQ ID NO:3 of the instant invention. Therefore, the disclosure of Sheppard anticipates claims 7-11." Applicants respectfully traverse.

Applicants respectfully submit that the cancellation of claims 8-10, without prejudice, renders the aforementioned rejection moot and request that the Examiner withdraw this §102(e) rejection as it pertains to these claims.

With respect to newly amended claims 7 and 11, Applicants submit the following remarks for the record. The polypeptide sequence (SEQ ID NO:18) was described by Sheppard in U.S. Patent No. 6,153,420 ('420), filed May 4, 1998, which claims priority to U.S. Serial No. 09/062,142, filed March 17, 1998 and U.S. Serial No. 60/044,185, filed April 24, 1997. However, Applicants submit that SEQ ID NO:18 as described in the '420 patent is not entitled to these earlier priority dates.

First, U.S. Serial No. 60/044,185 discloses SEQ ID NO:2, which differs from the disclosed SEQ ID NO:18 of the '420 patent and SEQ ID NO:3 of the present invention in that it contains 2 different amino acids at positions 60 and 299, 4 unidentified amino acids at positions 80, 95, 96 and 149 as well as 9 additional amino acids at the C-terminal end (amino acids 365-373) (See attached Appendix C). Second, U.S. Serial No. 09/062,142 discloses SEQ ID NO:15, which differs from the disclosed SEQ ID NO:18 of the '420 patent and SEQ ID NO:3 of the present invention in that it also contains 9 additional amino acids at the C-terminal end of the polypeptide (amino acids 365-373) (See attached Appendix D). Therefore, because SEQ ID NO:18 is different from those sequences found in the applications from which priority is

claimed, Applicants respectfully submit that SEQ ID NO:18 is entitled to only the May 4, 1998 filing date of the '420 patent.

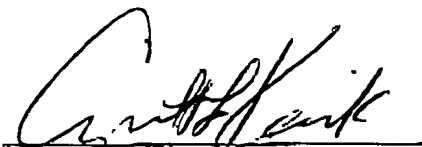
Applicants first described and disclosed the polypeptide SEQ ID NO:3 in the Japanese Patent Application JP 9/323129, filed November 25, 1997, which is *before* the May 4, 1998 priority date of the '420 patent by Sheppard. Therefore, Sheppard is unavailable as prior art against the instant application as it was filed *after* the priority date of the instant application. In view of the above, Applicants respectfully request that the Examiner withdraw the rejection of claims 7-11 under 35 U.S.C. §102(e).

CONCLUSION

If a telephone conversation with Applicants' attorney would help expedite the prosecution of the above-identified application, the Examiner is urged to call Applicants' attorney at (617) 227-7400.

Respectfully submitted,

LAHIVE & COCKFIELD, LLP



Cynthia L. Kanik, Ph.D.

Reg. No. 37,320

Attorney for Applicants

28 State Street
Boston, MA 02109
Tel: (617) 227-7400
Fax: (617) 742-4214

Date: February 8, 2002

APPENDIX A

Version With Markings To Show Changes Made

In the specification:

The sentence on page 55, line 4 has been replaced with the following rewritten sentence:

-- Table 4--

In the claims:

Claims 7 and 11 have been amended as follows:

7. (Amended) An isolated polypeptide ~~comprising~~ consisting of the amino acid sequence of SEQ ID NO:3.

11. (Amended) The isolated polypeptide of claim 8 7, further comprising heterologous amino acid sequences.

APPENDIX B**Pending Claims**

7. (Amended) An isolated polypeptide consisting of the amino acid sequence of SEQ ID NO:3.

11. (Amended) The isolated polypeptide of claim 7, further consisting of heterologous amino acid sequences.

APPENDIX C

FILE WRAPPER FOR PROVISIONAL U.S. APPLICATION

NO: **60/044,185**

INVENTOR: **PAUL O. SHEPPARD
LAURA JELINEK
DONALD C. FOSTER**

FILING DATE: **MARCH 24, 1997**

TITLE: **SERINE PROTEASE POLYPEPTIDES AND MATERIALS AND
METHODS FOR MAKING THEM**

***RELATED U.S. APPLICATION DATA:**

**USSN 09/072,384 FILED MAY 4, 1998
US PATENT 6,153,420**

**US PROVISIONAL APPLICATION NO. 60/044,185
FILED APRIL 24, 1997 [Captioned file]**

**USSN 09/062,142 FILED APRIL 17, 1998
ABANDONED**

***The related U.S. application data is drawn from the USPTO's public website and is not to be construed as a complete family of applications. Complete family information is available from the USPTO under 37 CFR §1.14.**

AGAGATATG

1634

(2) INFORMATION FOR SEQ ID NO.2:

(i) SEQUENCE CHARACTERISTICS

- (A) LENGTH 392 amino acids
- (B) TYPE amino acid
- (C) STRANDEDNESS single
- (D) TOPOLOGY linear

(ii) MOLECULE TYPE protein

(v) FRAGMENT TYPE internal

(ix) FEATURE:

(A) NAME/KEY Signal Sequence

(B) LOCATION 1..19

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION. SEQ ID NO.2.

```

Met Ala Gly Ile Pro Gly Leu Leu Phe Leu Leu Phe Phe Leu Leu Cys
      -15              -10              -5
Ala Val Gly Gln Val Ser Pro Tyr Ser Ala Pro Trp Lys Pro Thr Trp
      1              5              10
Pro Ala Tyr Arg Leu Pro Val Val Leu Pro Gln Ser Thr Leu Asn Leu
      15              20              25
Ala Lys Pro Asp Phe Gly Ala Glu Ala Lys Leu Glu Val Ser Ser Ser
      30              35              40              45
Cys Gly Pro Gln Cys His Lys Gly Thr Pro Leu Pro Thr Tyr Lys Glu
      50              55              60
Ala Lys Gln Tyr Leu Ser Tyr Glu Thr Leu Tyr Ala Asn Gly Ser Arg
      65              70              75
Thr Glu Xaa Gln Val Gly Ile Tyr Ile Leu Ser Ser Ser Gly Asp Gly
      80              85              90
Ala Xaa Xaa Arg Asp Ser Gly Ser Ser Gly Lys Ser Arg Arg Lys Arg
      95              100              105
Gln Ile Tyr Gly Tyr Asp Ser Arg Phe Ser Ile Phe Gly Lys Asp Phe
      110              115              120              125
Leu Leu Asn Tyr Pro Phe Ser Thr Ser Val Lys Leu Ser Thr Gly Cys
      130              135              140
Thr Gly Thr Leu Val Ala Glu Xaa His Val Leu Thr Ala Ala His Cys
      145              150              155
Ile His Asu Gly Lys Thr Tyr Val Lys Gly Thr Gln Lys Leu Arg Val
      160              165              170

```

Gly Phe Leu Lys Pro Lys Phe Lys Asp Gly Gly Arg Gly Ala Asn Asp
 175 180 185
 Ser Thr Ser Ala Met Pro Glu Gln Met Lys Phe Gln Trp Ile Arg Val
 190 195 200 205
 Lys Arg Thr His Val Pro Lys Gly Trp Ile Lys Gly Asn Ala Asn Asp
 210 215 220
 Ile Gly Met Asp Tyr Asp Tyr Ala Leu Leu Glu Leu Lys Lys Pro His
 225 230 235
 Lys Arg Lys Phe Met Lys Ile Gly Val Ser Pro Pro Ala Lys Gln Leu
 240 245 250
 Pro Gly Gly Arg Ile His Phe Ser Gly Tyr Asp Asn Asp Arg Pro Gly
 255 260 265
 Asn Leu Val Tyr Arg Phe Cys Asp Val Lys Asp Glu Thr Tyr Asp Leu
 270 275 280 285
 Leu Tyr Gln Gln Cys Asp Ala Gln Pro Gly Ala Ser Gly Tyr Gly Val
 290 295 300
 Tyr Val Arg Met Trp Lys Arg Gln Gln Gln Lys Trp Glu Arg Lys Ile
 305 310 315
 Ile Gly Ile Phe Ser Gly His Gln Trp Val Asp Met Asn Gly Ser Pro
 320 325 330
 Gln Asp Phe Asn Val Ala Val Arg Ile Thr Pro Leu Lys Tyr Ala Gln
 335 340 345
 Ile Cys Tyr Trp Ile Lys Gly Asn Tyr Leu Asp Cys Arg Glu Gly Asp
 350 355 360 365
 Thr Val Phe Leu Pro Gly Ser Asn
 370

(2) INFORMATION FOR SEQ ID NO 3

(1) SEQUENCE CHARACTERISTICS.

- (A) LENGTH: 17 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(x1) SEQUENCE DESCRIPTION: SEQ ID NO:3

TGYACNGGNW SNHTNRT

17

(2) INFORMATION FOR SEQ ID NO.4.

(1) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 base pairs
- (B) TYPE: nucleic acid

APPENDIX D

FILE WRAPPER FOR ABANDONED U.S. APPLICATION

SERIAL NO: **09/062,142**
INVENTORS: **PAUL O. SHEPPARD**
FILING DATE: **MARCH 17, 1998**
TITLE: **SERINE PROTEASE POLYPEPTIDES AND MATERIALS AND
METHODS FOR MAKING THEM**

RELATED U.S. APPLICATION DATA:

USSN 09/072,384 FILED MAY 4, 1998
US PATENT 6,153,420

US PROVISIONAL APPLICATION NO. 60/044,185
FILED APRIL 24, 1997

USSN 09/062,142 FILED APRIL 17, 1998
ABANDONED [Captioned file]

*The related U.S. application data is drawn from the USPTO's public website and is not to be construed as a complete family of applications. Complete family information is available from the USPTO under 37 CFR §1.14

(x1) SEQUENCE DESCRIPTION SEQ ID NO 15:

```

Met Ala Gly Ile Pro Gly Leu Leu Phe Leu Leu Phe Phe Leu Leu Cys
      -15      -10      -5
Ala Val Gly Gln Val Ser Pro Tyr Ser Ala Pro Trp Lys Pro Thr Trp
      1      5      10
Pro Ala Tyr Arg Leu Pro Val Val Leu Pro Gln Ser Thr Leu Asn Leu
      15      20      25
Ala Lys Pro Asp Phe Gly Ala Glu Ala Lys Leu Glu Val Ser Ser Ser
      30      35      40      45
Cys Gly Pro Gln Cys His Lys Gly Thr Pro Leu Pro Thr Tyr Glu Glu
      50      55      60
Ala Lys Gln Tyr Leu Ser Tyr Glu Thr Leu Tyr Ala Asn Gly Ser Arg
      65      70      75
Thr Glu Thr Gln Val Gly Ile Tyr Ile Leu Ser Ser Ser Gly Asp Gly
      80      85      90
Ala Gln His Arg Asp Ser Gly Ser Ser Gly Lys Ser Arg Arg Lys Arg
      95      100      105
Gln Ile Tyr Gly Tyr Asp Ser Arg Phe Ser Ile Phe Gly Lys Asp Phe
      110      115      120      125
Leu Leu Asn Tyr Pro Phe Ser Thr Ser Val Lys Leu Ser Thr Gly Cys
      130      135      140
Thr Gly Thr Leu Val Ala Glu Lys His Val Leu Thr Ala Ala His Cys
      145      150      155
Ile His Asp Gly Lys Thr Tyr Val Lys Gly Thr Gln Lys Leu Arg Val
      160      165      170
Gly Phe Leu Lys Pro Lys Phe Lys Asp Gly Gly Arg Gly Ala Asn Asp
      175      180      185
Ser Thr Ser Ala Met Pro Glu Gln Met Lys Phe Gln Trp Ile Arg Val
      190      195      200      205
Lys Arg Thr His Val Pro Lys Gly Trp Ile Lys Gly Asn Ala Asn Asp
      210      215      220
Ile Gly Met Asp Tyr Asp Tyr Ala Leu Leu Glu Leu Lys Lys Pro His
      225      230      235
Lys Arg Lys Phe Met Lys Ile Gly Val Ser Pro Pro Ala Lys Gln Leu
      240      245      250
Pro Gly Gly Arg Ile His Phe Ser Gly Tyr Asp Asn Asp Arg Pro Gly
      255      260      265
Asn Leu Val Tyr Arg Phe Cys Asp Val Lys Asp Glu Thr Tyr Asp Leu
      270      275      280      285
Leu Tyr Gln Gln Cys Asp Ala Gln Pro Gly Ala Ser Gly Ser Gly Val
      290      295      300
Tyr Val Arg Met Trp Lys Arg Gln Gln Gln Lys Trp Glu Arg Lys Ile
      305      310      315

```

Ile Gly Ile Phe Ser Gly His Gln Trp Val Asp Met Asn Gly Ser Pro
 320 325 330
 Gln Asp Phe Asn Val Ala Val Arg Ile Thr Pro Leu Lys Tyr Ala Gln
 335 340 345
 Ile Cys Tyr Trp Ile Lys Gly Asn Tyr Leu Asp Cys Arg Glu Gly Asp
 350 355 360 365
 Thr Val Phe Pro Pro Gly Ser Asn
 370

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS

- (A) LENGTH 1176 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS single
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION. SEQ ID NO:16

```

ATGGCNGGNA THCCNGGNYT NYTNTTYTNN YNTTYTYY TNYTNTGYGC NGTNGGNCAR      60
GTNWSNCCNT AYWSNGCNCC NTGGAARCCN ACNTGGCCNG CNTAYMGNYT NCCNGTNGTN      120
YTCCNCARW SNACNYTNAA YYTNGCNAAR CCNGAYTTYG GNGCNGARGC NAARYTNGAR      180
GTNWSNWSNW SNTGYGGNCC NCARTGYCAY AARGGNACNC CNYTNCCNAC NTAYGARGAR      240
GCNAARCART AYYTNWSNTA YGARACNYTN TAYGCNAAYG GNWSNMGNAC NGARACNCAR      300
GTNGGNATHT AYATHYTNWS NWSNWSNGGN GAYGGNGCNC ARCAVMGNGA YWSNGGNWSN      360
WSNGGNAARW SNMGMGNAA RMGNCARATH TAYGGNTAYG AYWSNMGNTT YWSNATHTTY      420
GGNAARGAYT TYYTNYTNAA YTAYCCNTTY WSNACNWSNG TNAARYTNWS NACNGGNTGY      480
ACNGGNACNY TNGTNGCNGA RAARCAYGTN YTNACNGCNG CNCAYTGYAT HCAYGAYGGN      540
AARACNTAYG TNAARGGNAC NCARAARYTN MGNGTNGGNT TYYTNAARCC NAARTTYAAR      600
GAYGGNGGNN GNGGNGCNAA YGAYWSNACN WSNGCNATGC CNGARCARAT GAARTTYCAR      660
TGGATHMGNG TNAARMGNAC NCAYGTNCCN AARGGNTGGA THAARGGNAA YGCNAAYGAY      720
ATHGGNATGG AYTAYGAYTA YGCNYTNYTN GARYTNAARA ARCCNCAYAA RMGNAARTTY      780
ATGAARATHG GNGTNWSNCC NCCNGCNAAR CARYTNCCNG GNGGNMGNAT HCAYTTYWSN      840
GGNTAYGAYA AYGAYMGNCC NGGNAAYYTN GTNTAYMGNT TYTGYGAYGT NAARGAYGAR      900
ACNTAYGAYY TNYTNTAYCA RCARTGYGAY GCNCARCCNG GNGCNWSNGG NWSNGGNGTN      960
TAYGTNMGNA TGTGGAARMG NCARCARCAR AARTGGGARM GNAARATHAT HGGNATHTTY     1020
WSNGGNCAYC ARTGGGTNGA YATGAAYGGN WSNCCNCARG AYTTYAAAYGT NGCNGTNMGN     1080
ATHACNCCNY TNAARTAYGC NCARATHTYG TAYTGGATHA ARGGNAAAYTA YYTNGAYTGY     1140
MNGGARGGNG AYACNGTNTT YCCNCCNGGN WSNAAY                               1176

```

Office No. GIN-6713CPUS

**THE "RECEIVED" STAMP OF THE PATENT AND TRADEMARK OFFICE
IMPRINTED HEREON ACKNOWLEDGES THE FILING OF:**

Description of Paper² and No.: Transmittal Letter (1 page, in duplicate); Amendment and Response (16 pages, including 1 page of Appendix A, 1 page of Appendix B, 3 pages of Appendix C, and 3 pages of Appendix D); Request for Three-Month Extension of Time (1 page, in duplicate); Check in the amount of \$920 00 (extension fee); and this prepaid acknowledgment postcard.

Title: Human Proteins Having Transmembrane Domains and DNAs Encoding These Proteins

Name of Applicant(s): Seishi Kato, et al.

Intf. or Serial No.: 09/554,933

Atty: AEM/CLK/EFW

Date: February 8, 2002

***with Certificate of First Class Mailing**